OIPE IAP75 MAY 18 2006 PATENT & TRADEMARK OFFICE

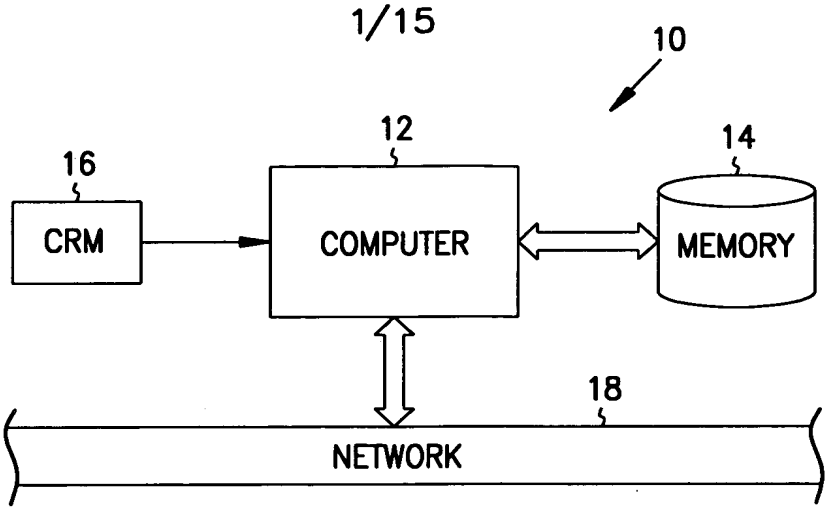

FIG. 1

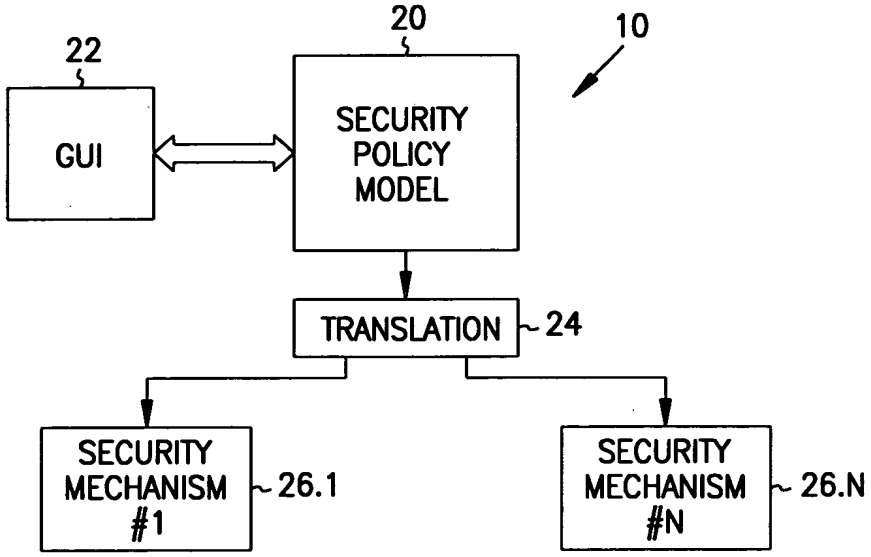

FIG. 2

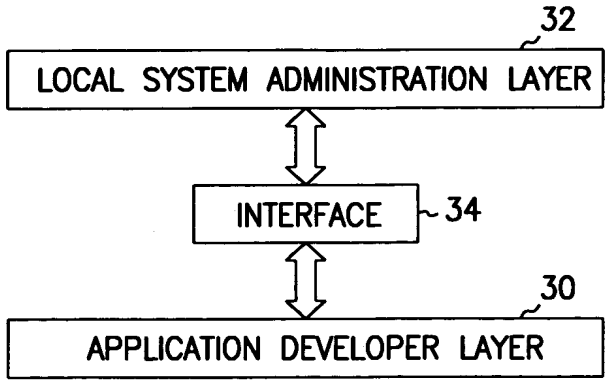

FIG. 3

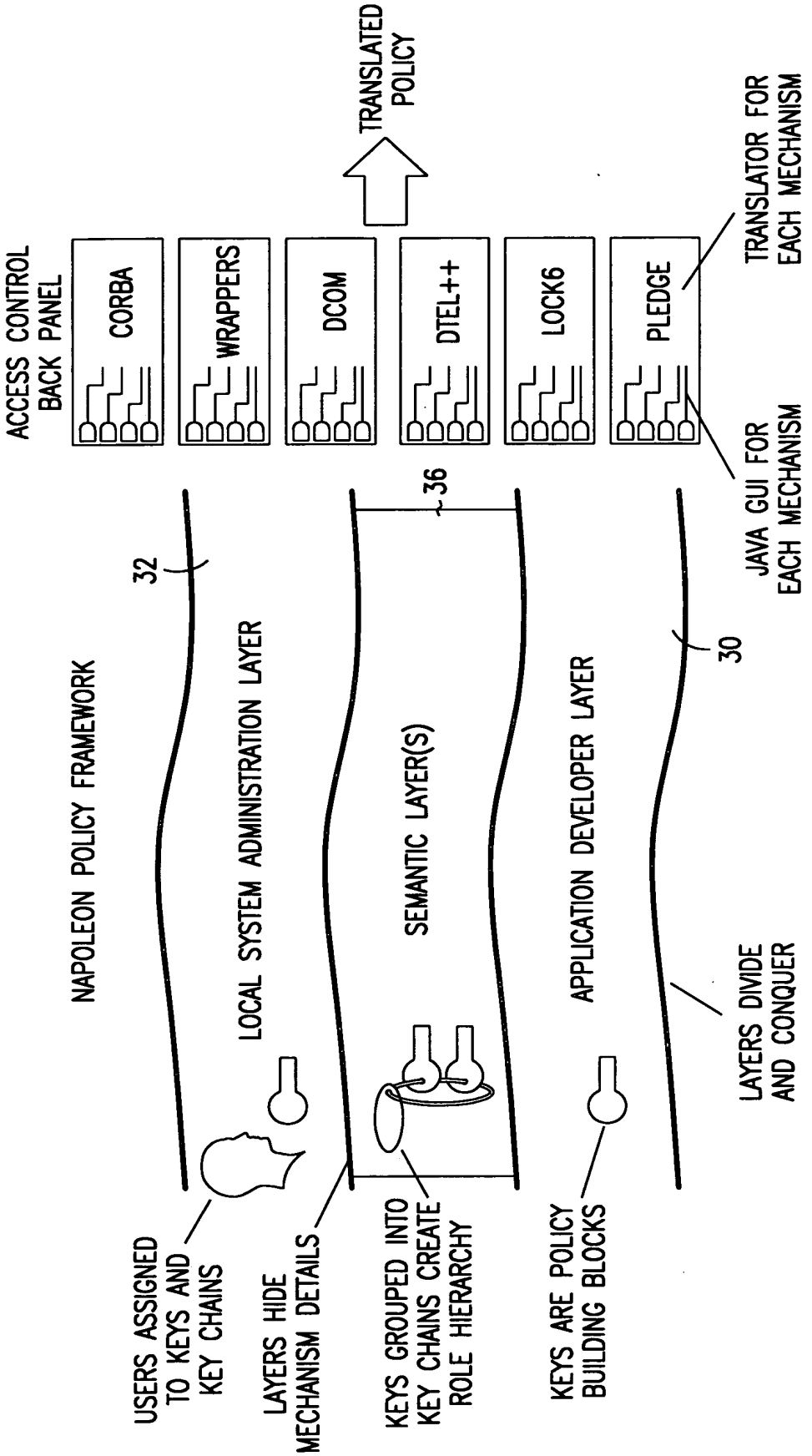
TRANSLATED POLICY
ACCESS CONTROL BACK PANEL
CORBA
WRAPPERS
DCOM
DTEL++
LOCK6
PLEDGE
TRANSLATOR FOR EACH MECHANISM
JAVA GUI FOR EACH MECHANISM
36
32
30
NAPOLEON POLICY FRAMEWORK
LOCAL SYSTEM ADMINISTRATION LAYER
SEMANTIC LAYER(S)
APPLICATION DEVELOPER LAYER
LAYERS DIVIDE AND CONQUER
USERS ASSIGNED TO KEYS AND KEY CHAINS
LAYERS HIDE MECHANISM DETAILS
KEYS GROUPED INTO KEY CHAINS CREATE ROLE HIERARCHY
KEYS ARE POLICY BUILDING BLOCKS

FIG. 4

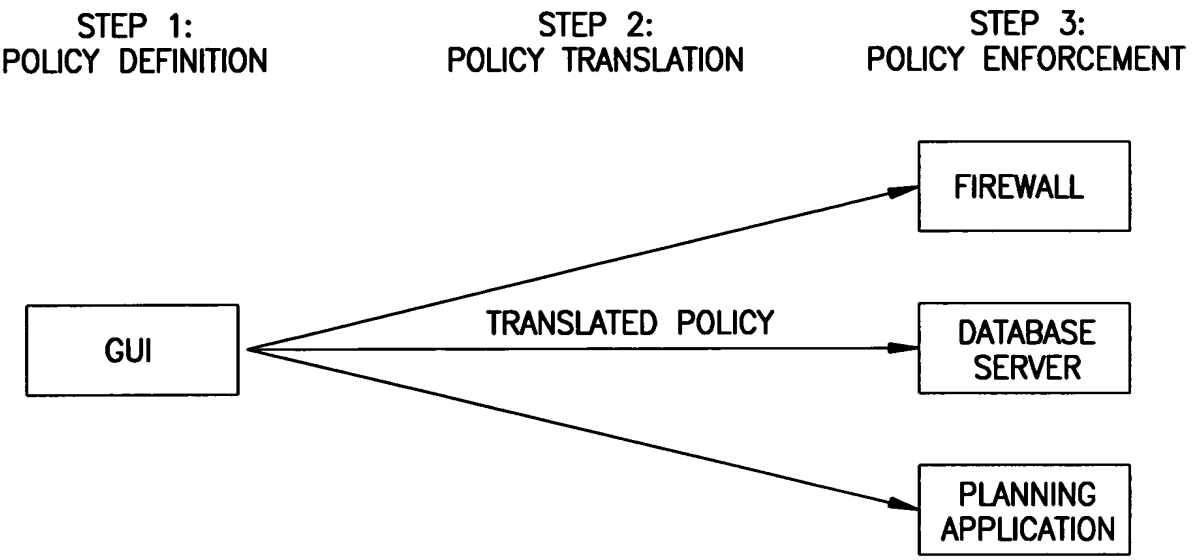
STEP 1:
POLICY DEFINITION
STEP 2:
POLICY TRANSLATION
STEP 3:
POLICY ENFORCEMENT
GUI
TRANSLATED POLICY
FIREWALL
DATABASE SERVER
PLANNING APPLICATION

FIG. 5

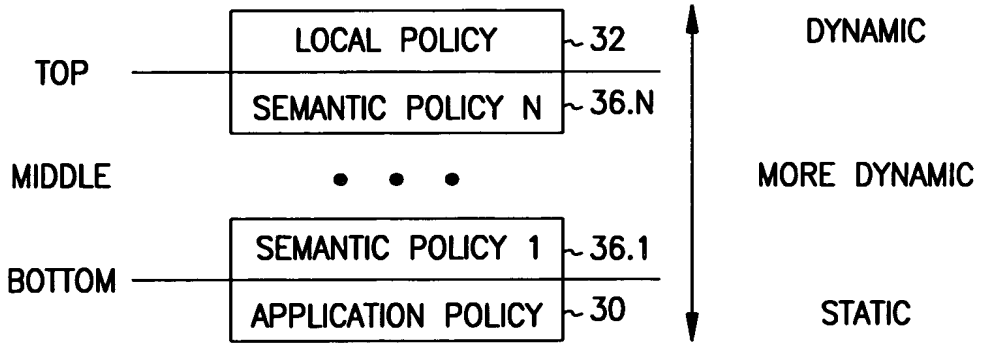
TOP
MIDDLE
BOTTOM
LOCAL POLICY
32
SEMANTIC POLICY N
36.N
SEMANTIC POLICY 1
36.1
APPLICATION POLICY
30
DYNAMIC
MORE DYNAMIC
STATIC

FIG. 6

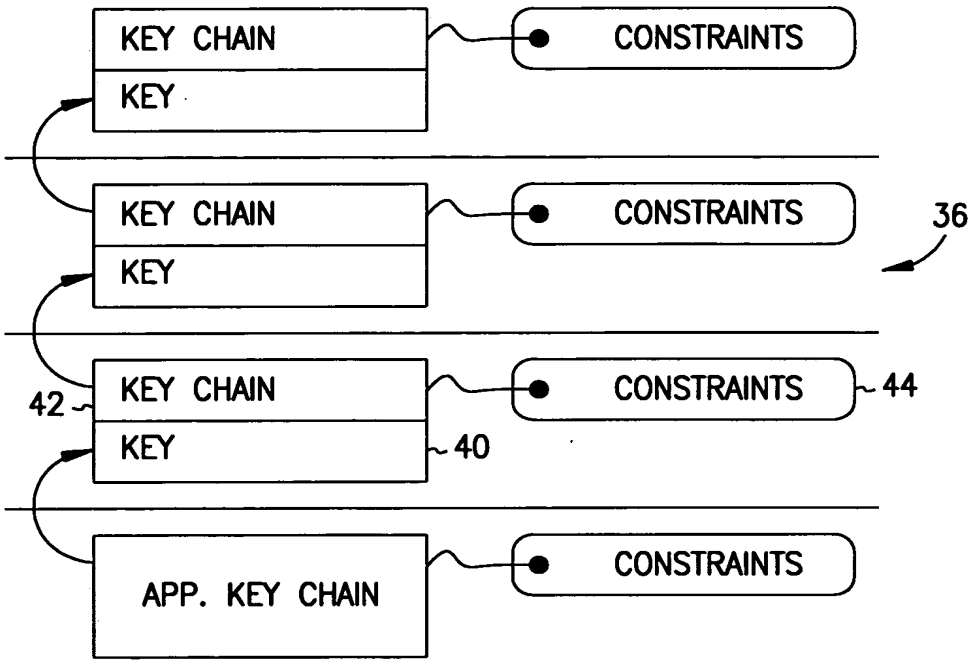
KEY CHAIN
KEY
CONSTRAINTS
KEY CHAIN
KEY
CONSTRAINTS
36
42
KEY CHAIN
KEY
40
CONSTRAINTS
44
APP. KEY CHAIN
CONSTRAINTS

FIG. 7

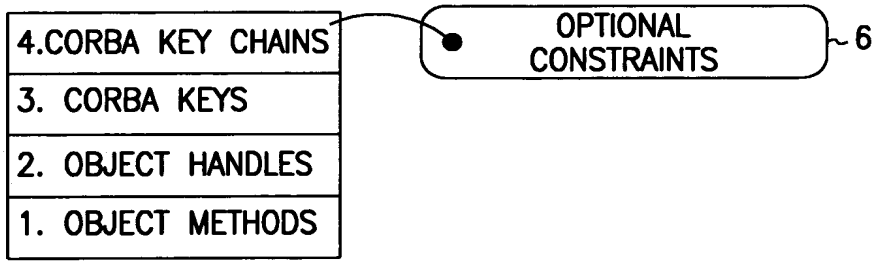
4.CORBA KEY CHAINS
3. CORBA KEYS
2. OBJECT HANDLES
1. OBJECT METHODS
OPTIONAL CONSTRAINTS
6

FIG. 8

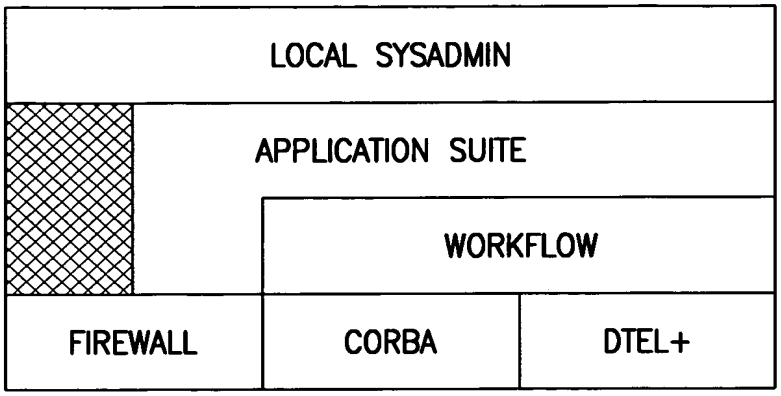
LOCAL SYSADMIN
APPLICATION SUITE
WORKFLOW
FIREWALL
CORBA
DTEL+

FIG. 9A

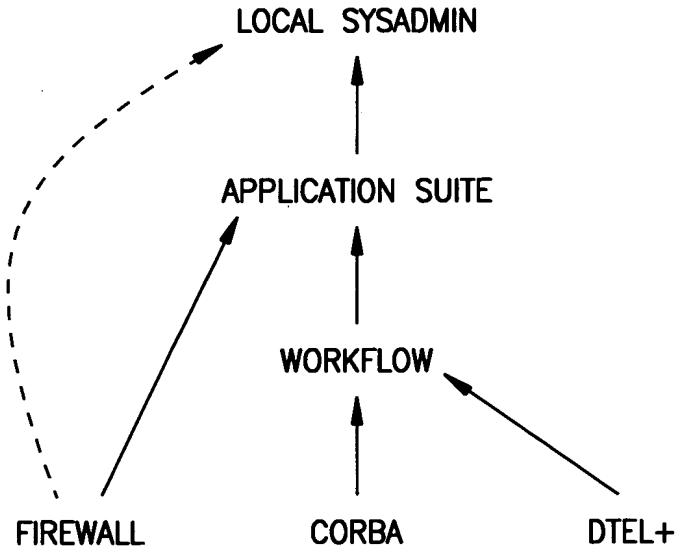
LOCAL SYSADMIN
APPLICATION SUITE
WORKFLOW
FIREWALL
CORBA
DTEL+

FIG. 9B

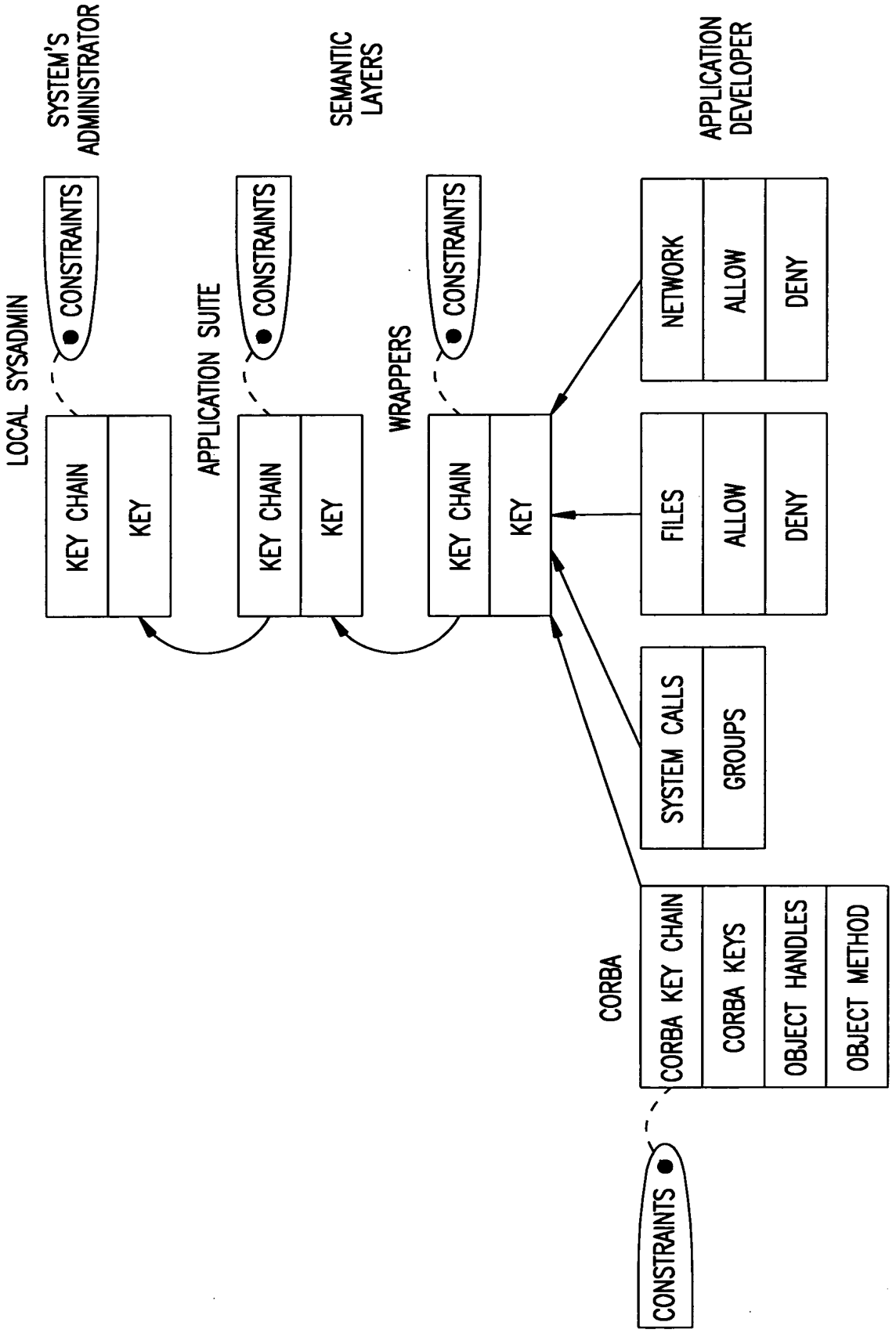
SYSTEM'S ADMINISTRATOR
SEMANTIC LAYERS
APPLICATION DEVELOPER
LOCAL SYSADMIN
APPLICATION SUITE
WRAPPERS
CONSTRAINTS
KEY CHAIN
KEY
NETWORK
ALLOW
DENY
FILES
SYSTEM CALLS
GROUPS
CORBA
CORBA KEY CHAIN
CORBA KEYS
OBJECT HANDLES
OBJECT METHOD

FIG. 10

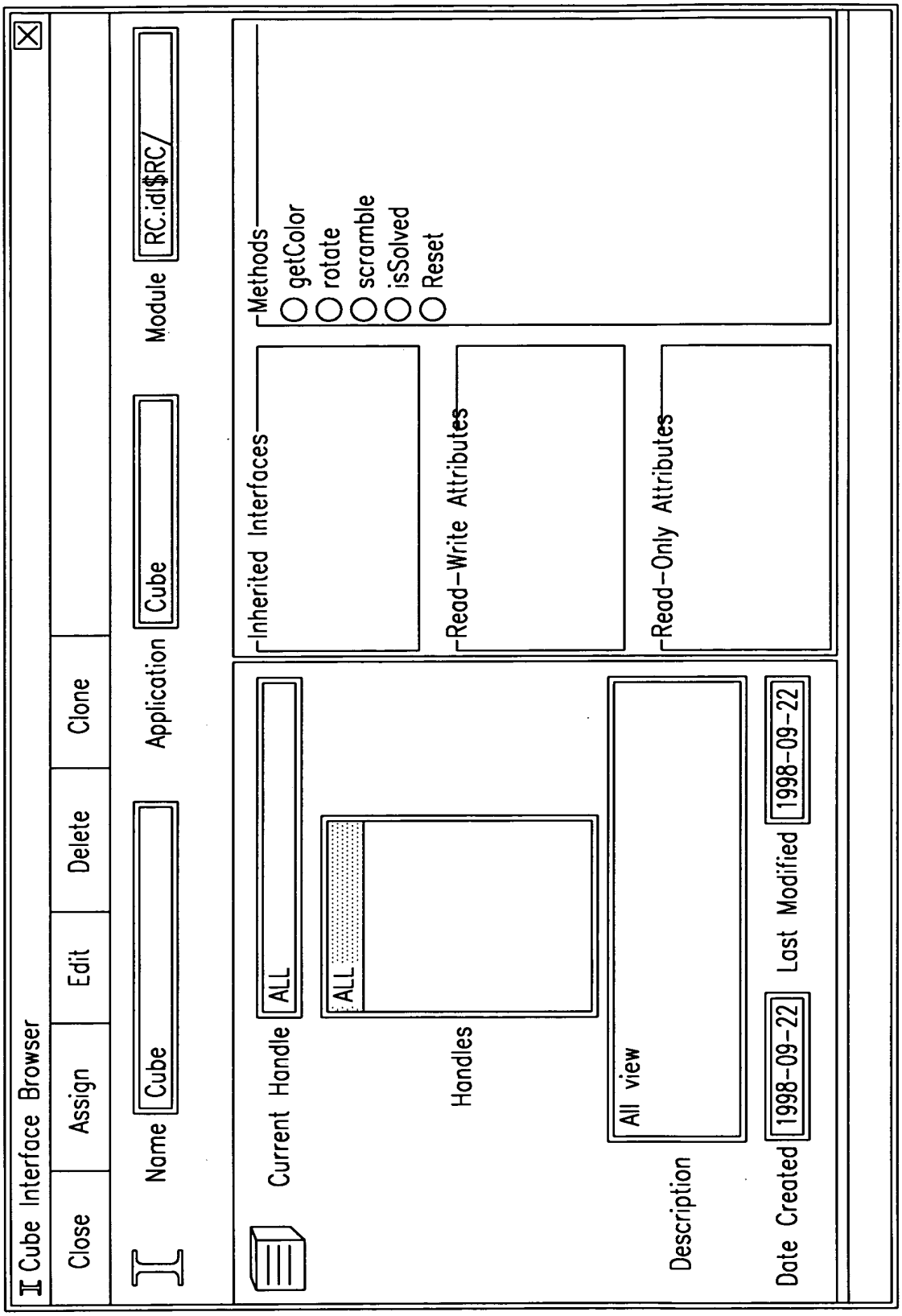
Cube Interface Browser
Close
Assign
Edit
Delete
Clone
Name
Cube
Application
Cube
Module
RC.idl$RC/
Inherited Interfaces
Methods
getColor
rotate
scramble
isSolved
Reset
Read-Write Attributes
Read-Only Attributes
Current Handle
ALL
ALL
Handles
All view
Description
Date Created
1998-09-22
Last Modified
1998-09-22

FIG. 11

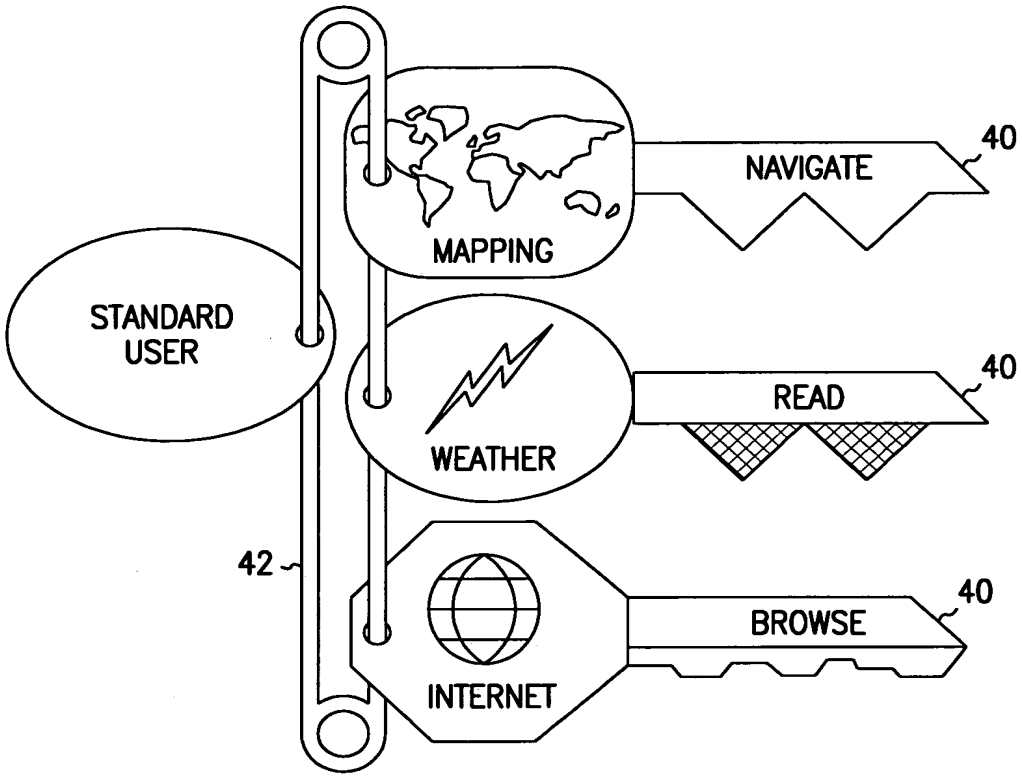
STANDARD USER
MAPPING
NAVIGATE
40
WEATHER
READ
40
42
INTERNET
BROWSE
40

FIG. 12

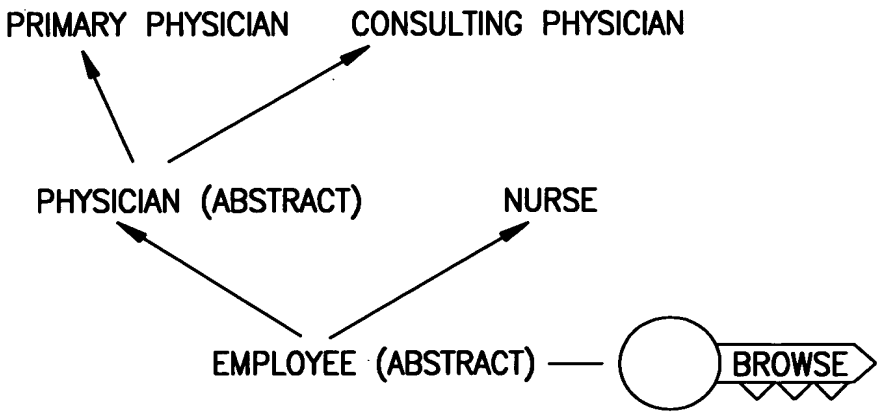

FIG. 13A

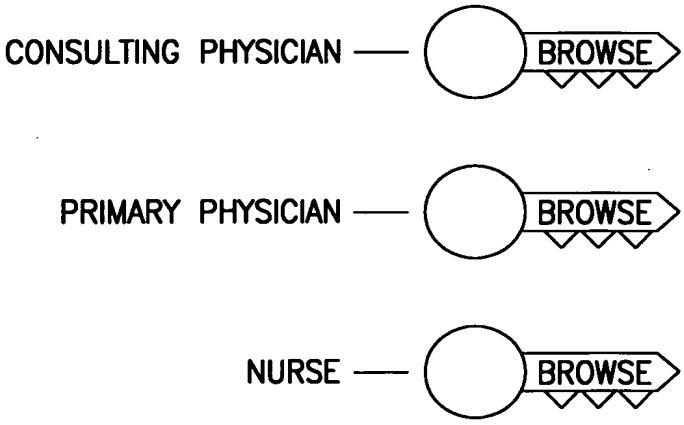

FIG. 13B

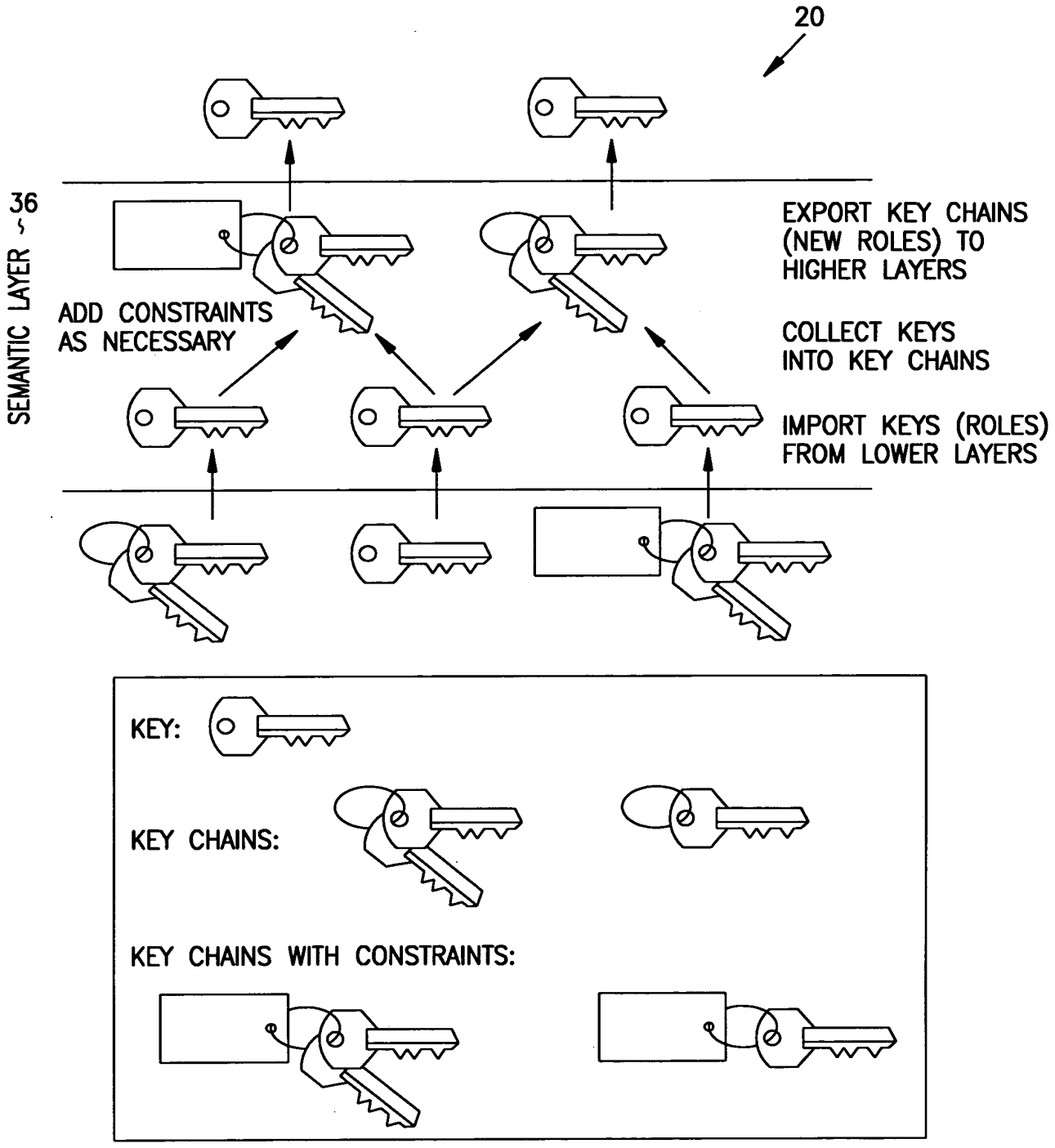
20
36
SEMANTIC LAYER
ADD CONSTRAINTS AS NECESSARY
EXPORT KEY CHAINS (NEW ROLES) TO HIGHER LAYERS
COLLECT KEYS INTO KEY CHAINS
IMPORT KEYS (ROLES) FROM LOWER LAYERS
KEY:
KEY CHAINS:
KEY CHAINS WITH CONSTRAINTS:

FIG. 14

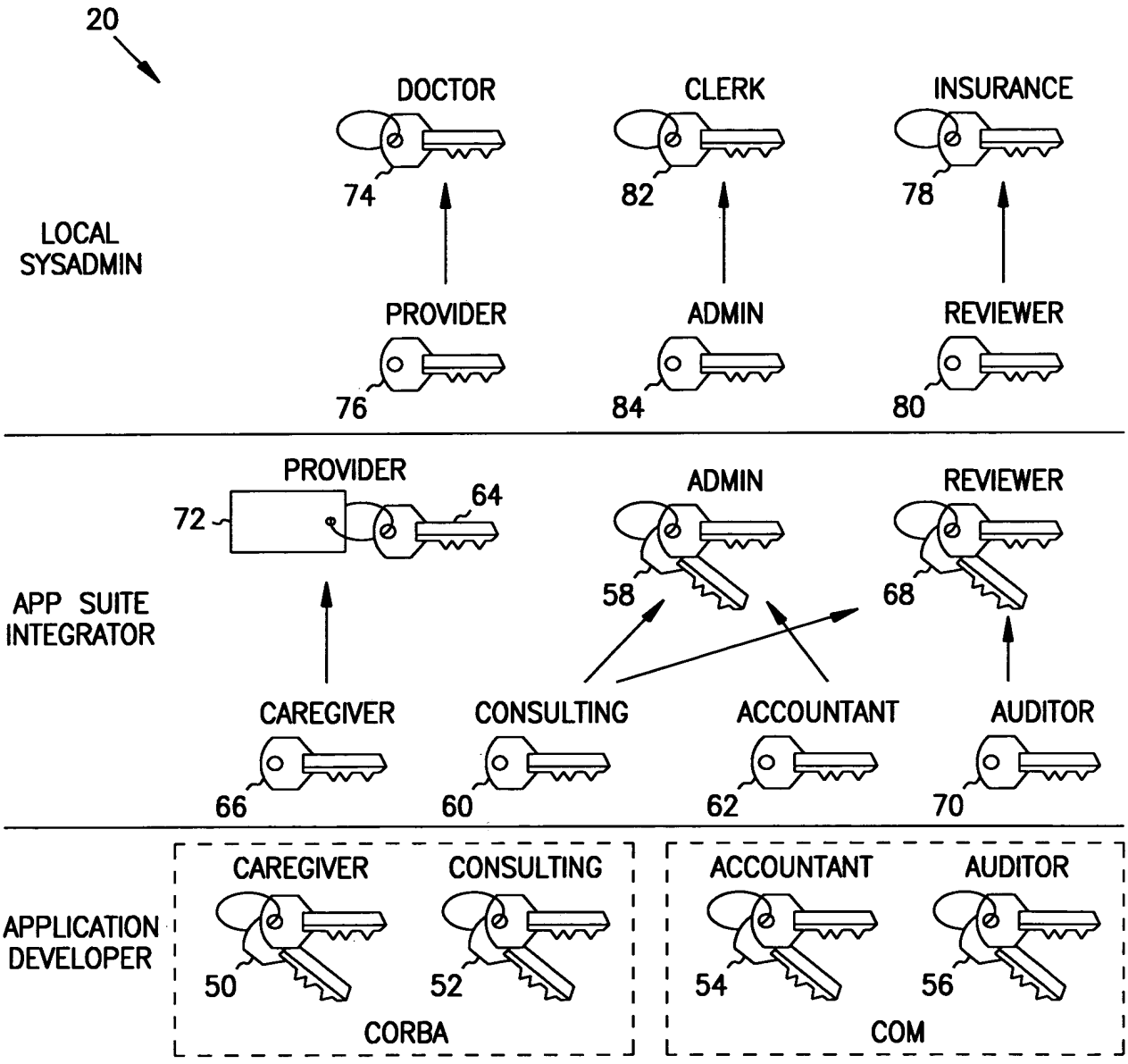
20
LOCAL SYSADMIN
DOCTOR
74
CLERK
82
INSURANCE
78
PROVIDER
76
ADMIN
84
REVIEWER
80
APP SUITE INTEGRATOR
PROVIDER
72
64
ADMIN
58
REVIEWER
68
CAREGIVER
66
CONSULTING
60
ACCOUNTANT
62
AUDITOR
70
APPLICATION DEVELOPER
CAREGIVER
50
CONSULTING
52
CORBA
ACCOUNTANT
54
AUDITOR
56
COM

FIG. 15

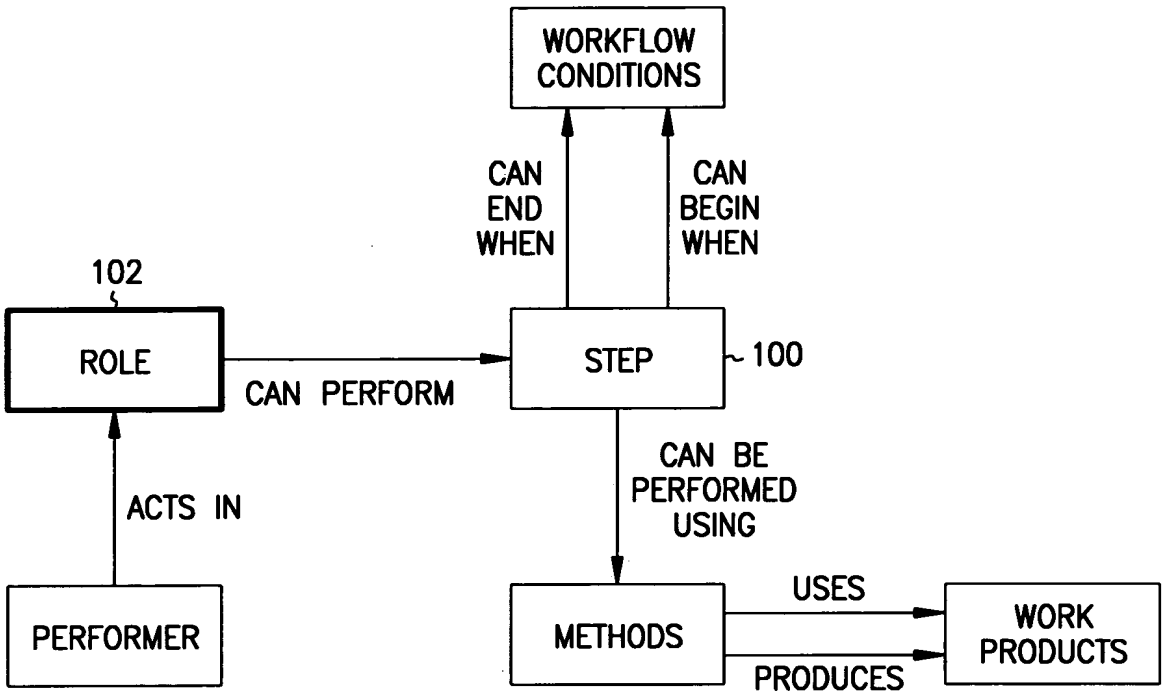
WORKFLOW CONDITIONS
CAN END WHEN
CAN BEGIN WHEN
102
ROLE
CAN PERFORM
STEP
100
CAN BE PERFORMED USING
ACTS IN
PERFORMER
METHODS
USES
PRODUCES
WORK PRODUCTS

FIG. 16

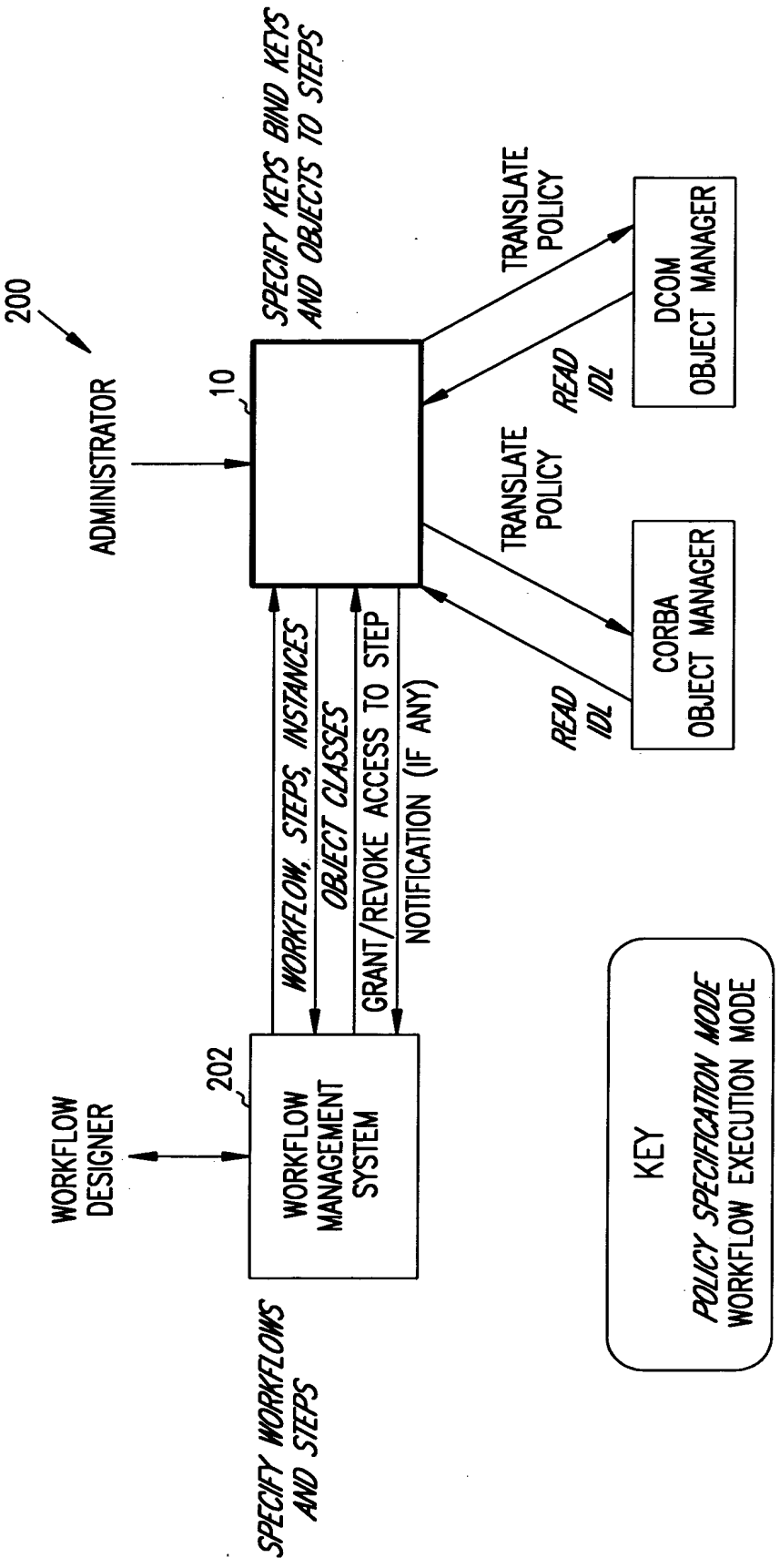
200
ADMINISTRATOR
10
SPECIFY KEYS BIND KEYS AND OBJECTS TO STEPS
TRANSLATE POLICY
READ IDL
DCOM OBJECT MANAGER
TRANSLATE POLICY
READ IDL
CORBA OBJECT MANAGER
WORKFLOW, STEPS, INSTANCES
OBJECT CLASSES
GRANT/REVOKE ACCESS TO STEP
NOTIFICATION (IF ANY)
WORKFLOW DESIGNER
202
WORKFLOW MANAGEMENT SYSTEM
SPECIFY WORKFLOWS AND STEPS
KEY
POLICY SPECIFICATION MODE
WORKFLOW EXECUTION MODE

FIG. 17

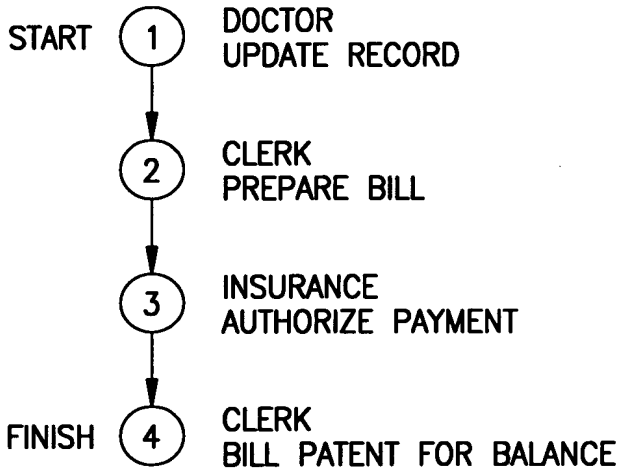
START
1
DOCTOR
UPDATE RECORD
2
CLERK
PREPARE BILL
3
INSURANCE
AUTHORIZE PAYMENT
FINISH
4
CLERK
BILL PATENT FOR BALANCE

FIG. 18

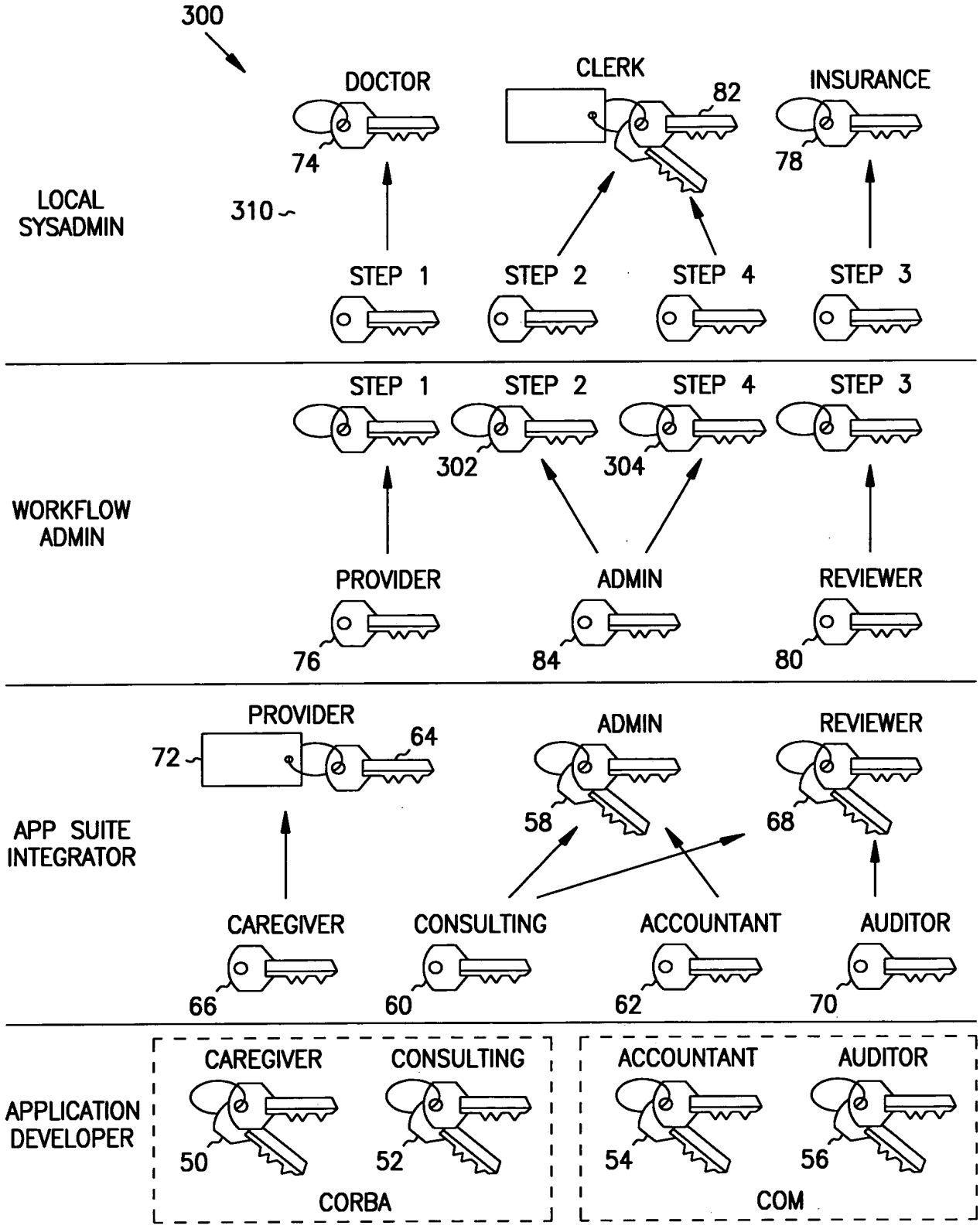
300
LOCAL SYSADMIN
310
DOCTOR
74
CLERK
82
INSURANCE
78
STEP 1
STEP 2
STEP 4
STEP 3
WORKFLOW ADMIN
STEP 1
STEP 2
STEP 4
STEP 3
302
304
PROVIDER
76
ADMIN
84
REVIEWER
80
APP SUITE INTEGRATOR
PROVIDER
72
64
ADMIN
58
REVIEWER
68
CAREGIVER
66
CONSULTING
60
ACCOUNTANT
62
AUDITOR
70
APPLICATION DEVELOPER
CAREGIVER
50
CONSULTING
52
CORBA
ACCOUNTANT
54
AUDITOR
56
COM

FIG. 19